

REMARKS

This is in full and timely response to the non-final Office Action dated July 19, 2006. The present Amendment amends claims 1 and 3-5 in order to further clarify a portion of the scope sought to be patented, and otherwise disputes certain findings of fact made in connection with the rejection of the claims. Support for these amendments can be found variously throughout the specification, including, for example, original claims 1 and 3-5, and on page 8, line 19 through page 9, line 8. No new matter has been added.

Accordingly, claims 1-5 are presently pending in the application, each of which is believed to be in immediate condition for allowance. Reexamination and reconsideration in light of the present Amendment and the following remarks are respectfully requested.

Claim to Priority

Acknowledgement of the proper receipt of the certified formal papers filed in connection with Applicant's claim to priority under 35 U.S.C. § 119(a)-(d) is noted with appreciation.

Objections

The Applicant thanks the Examiner for a thorough reading of the specification and claims. In accordance with the Examiner's suggestions, the specification and the claims have been amended to correct minor informalities. Withdrawal of these objections is therefore courteously solicited.

Claim Rejections- 35 U.S.C. § 103

In the Action, claims 1-5 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over European Patent No. 0 146 374 to Venturello et al. ("Venturello") in view of U.S. Patent No. 2,813,908 to Young ("Young") or British Patent No. GB 1 208 144. This rejection is respectfully traversed.

According to Federal Circuit precedent, the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103 rests squarely on the shoulders of the Examiner. *In re Rinehart*, 531 F.2d 1048, 1052 (C.C.P.A. 1976); *accord*. MPEP 2142. To establish a *prima facie* case of

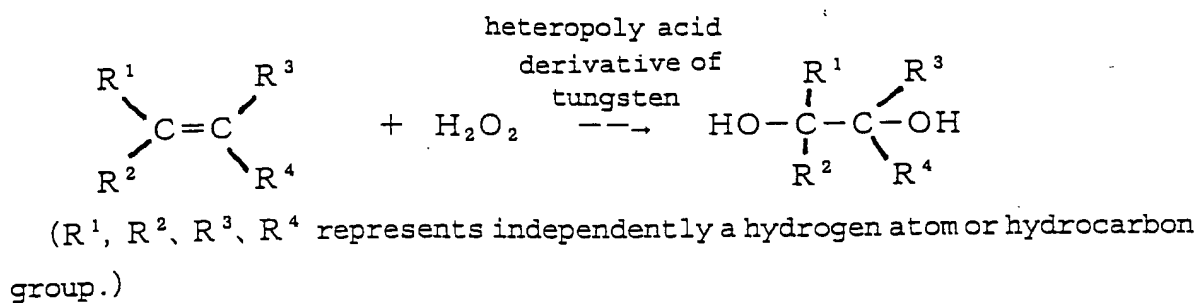
obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See, e.g., Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references”); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) (“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references”; *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) (“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination”); *accord*. MPEP 2143.

It is established law that one “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *Ecolochem, Inc. v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (citing *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988)). Indeed, “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.” *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Moreover, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

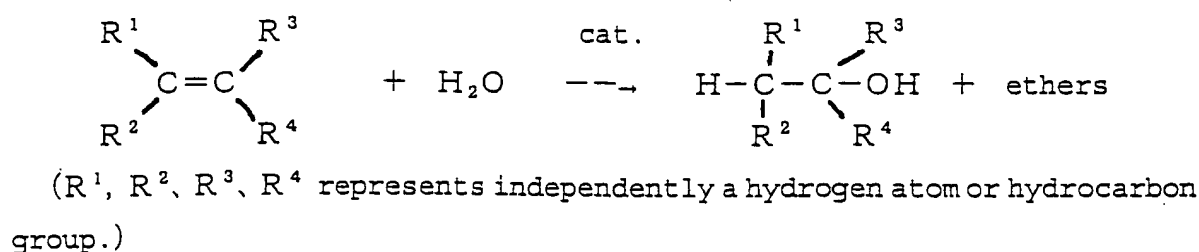
Additionally, there must be a reasonable expectation that the proposed modifications or combination would be successful. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375 (Fed. Cir. 1986); *accord*. MPEP 2143.02.

Claim 1 discloses, *inter alia*, A method for producing a 1,2-diol compound comprising the steps of reacting the olefin compound with hydrogen peroxide **in the presence of a polymer compound having a sulfonic acid group** to obtain the 1,2-diol compound.

In contrast, while Venturello arguably discloses a method for producing vicinal diol using olefin and H₂O₂, Venturello fails to disclose, teach, or even suggest the use of a polymer catalyst having a sulfonic acid group (*see Venturello at the Abstract*). Rather, Venturello discloses the use of heteropoly acid derivatives of tungsten (W) as the catalyst(s) for the reaction (*see Venturello at page 8, lines 15-20 and claim 1*), with the reaction being expressed as follows:



Young and GB 1 208 144 each disclose a method of making a monohydroxyl alcohol and ether based on a hydration reaction of olefin and water. The olefin hydration of both Young and GB 1 208 144 is expressed as follows:



Young states “this invention relates to the production of alcohols and ethers by the direct hydration of the lower olefins such as ethylene, propylene, and n-butylenes” (*see Young at column 1, lines 14-16*). GB 1 208 144 states that “the invention relates to a process for the production of alcohols and ethers by the direct addition of water to lower olefins” (*see GB 1 208 144 at page 1, left column, lines 9-11*).

Accordingly, the subject matter of the Present Application differs from Young and GB 1 208 144 in that it relates to a method of making a **vicinal diol** (di-hydroxyl alcohol) from an olefin using a **hydrogen peroxide** (H_2O_2). While Young and GB 1 208 144 arguably disclose a method of using a “cationic exchange resin” for a hydration reaction to form a monohydroxyl alcohol, they both fail to disclose, teach, or even suggest a method of making a vicinal diol (di-hydroxyl alcohol) from an olefin and hydrogen peroxide (H_2O_2) using a catalytic function.

Generally, a catalyst in a chemical reaction is unique to a specific chemical reaction. A person skilled in the art cannot reasonably foresee that a catalytic function of a catalyst for one chemical reaction can be used as a catalyst to perform a completely separate chemical reaction. Accordingly, even though Young and GB 1 208 144 disclose a “cationic exchange resin” which is used as a catalyst for a chemical reaction between water and a diol to form a monohydroxyl alcohol, a person skilled in the art could not reasonably foresee that the catalyst could be used for a chemical reaction between hydrogen peroxide and a diol to form a vicinal diol, as presently claimed.

As discussed above, Venturello does not disclose, teach or even suggest any of the catalysts of the presently claimed invention, and neither Young nor GB 1 208 144 discloses, teaches, or even suggests the chemical reaction between hydrogen peroxide and an olefin to form a vicinal diol.

The catalysts disclosed in Venturello (heteropoly acid derivatives of tungsten) and the catalysts disclosed in Young and GB 1 208 144 (cationic exchange resins) are completely different types of catalysts. The chemical reactions disclosed in Venturello are also completely different from the reactions disclosed in Young and GB 1 208 144. Therefore, one would not reasonably expect that a method, which uses the catalysts of Young and GB 1 208 144 to form a vicinal diol according to the method described in Venturello, would be successful.

Accordingly, the Applicant believes the arguments in the Office Action as supported by the cited references constitutes hindsight reconstruction, since the motivation set forth in the claims are not derived from the teachings and suggestions of the cited references, but instead

are derived from Applicant's own disclosure. Hence, the alleged combination of references is clearly the result of hindsight reconstruction based on the teachings of the present application. When determining obviousness under 35 U.S.C. §103, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143, 229 USPQ 182, 187 (Fed. Cir. 1986).

Thus, for the above reasons, a *prima facie* case of obviousness has not been established, and withdrawal of this rejection is respectfully requested. *See, e.g., In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord.* MPEP 2143.03.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SAE-0027 from which the undersigned is authorized to draw.

Dated: October 19, 2006

Respectfully submitted,

By  - 47,255

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